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>
> **Robert Clerk**
> **Senior Telecommunications Engineer**
> **TasNetworks**

TasNetworks
Delivering your power

TasNetworks deployed the Fujitsu FRX-3 Microwave radio, reducing operational costs, improving throughput and providing increased visibility of performance.

At a glance
Country: Australia
Industry: Telecommunications
Founded: 2014
Website: tasnetworks.com.au

Challenge
TasNetworks' backbone radio platform was no longer supported and had limited bandwidth. The company wanted to find a robust, market leading, high-speed replacement that could be installed across its rugged and remote terrain.

Solution
After a competitive procurement process, TasNetworks turned to Fujitsu, which tested, configured and installed 18 FUJITSU Network FRX-3 Series Long-Haul Microwave Radio System links to provide communications across its power network as well as services to the Tasmanian government and commercial entities.

Benefit
- Throughput has increased five-fold, allowing more services to be delivered with faster time to market

- A five-year support contract with Fujitsu reduces risk and ensures reliability

- Service visibility and better monitoring of service levels enable issues to be resolved more quickly - improving availability

- Enhanced functionality allows TasNetworks to easily configure and monitor new services while reducing operational costs

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Customer

TasNetworks is a Tasmanian state-owned corporation with a focus on caring for customers and making their experience easier. TasNetworks has over 250,000 customers across Tasmania and supplies power from the generation source to homes and businesses through a network of transmission towers, substations and powerlines. TasNetworks is also a provider of telecommunications services to the electricity, wholesale, government and corporate sectors with access to 1,676 kilometers of optical fiber cable and 38 hilltop radio sites.

Products and Services

- FUJITSU Network FRX-3 Series Long-Haul Microwave Radio System

Upgrading an aging communications platform

TasNetworks' electricity transmission and distribution networks relied on a ten-year-old radio backbone network which was simply no longer fit for purpose. The company needed to find a more flexible communications platform that would carry both radio and ethernet across mountainous and remote terrain.

"We wanted to find a scalable, hybrid solution combining traditional time-division multiplexing (TDM) with Ethernet services. We also wanted something that could be quickly and easily configured," explains Robert Clerk, Senior Telecommunications Engineer, TasNetworks.

After defining its specific requirements internally, TasNetworks researched potential partners for this ambitious project. It then issued a closed tender to three vendors based on key criteria, including price, performance, support and throughput.

"We wanted a system suitable for high availability in the power industry that would also offer cost-effective communications for the commercial sector," adds Clerk. "Basically, we needed a value-for-money turnkey proposition. Fujitsu's price was competitive, the schedule and timeframes were good and the equipment itself was impressive. Therefore, it received the best score and won the contract."

One important – and challenging – factor in this project is the fact that the network covers a vast amount of inhospitable terrain. To ensure as seamless a deployment as possible, Fujitsu partnered with VASP for rigging services.

Long-haul microwave in a remote setting

Over the course of six months, TasNetworks leveraged Fujitsu's global expertise to deploy 18 FUJITSU FRX-3 Series Long-Haul Microwave Radio System links, which provide long reach and high-throughput. Designed to meet the challenges faced by rapidly evolving mobile networks, these systems feature an innovative and robust architecture that makes for simple operation. With FRX-3 systems, TasNetworks can deliver microwave transmission networks quickly and cost-effectively.

The deployment began in Japan and then Sydney, where a series of extensive stress-tests proved the equipment could survive the heat and snow of the Tasmanian countryside. Fujitsu then worked with VASP to install and connect the new network, sometimes in conditions that caused the teams to be snowed in for days.

"The implementation methodology was unique, with a refined and innovative cut-over approach that saved significant time and effort," continues Clerk. "That meant we didn't have to install temporary dishes or infrastructure, and could run the legacy network in parallel with the new Fujitsu network until we were ready to switch. It was the comprehensive lab-testing by Fujitsu that ensured we could run concurrently."

Speed, throughput and reliability

TasNetworks' new Fujitsu-built communications platform provides vital supervisory control and data acquisition (SCADA) and transline protection services, as well as voice services, to its substations. In addition, TasNetworks commercial customers, including state government, utilities and major corporations, can use the network courtesy of the significantly increased bandwidth.

"Video services and remote working are becoming more important and this allows us to keep pace. It enables digital transformation for rural communities by upping the bandwidth from 155 Mbps to 600 Mbps," comments Clerk. "In operational terms, it has effectively five-times the installed capacity but we also have the option of expanding as we need to."

The Fujitsu equipment also comes with full support, reducing risk, although to date the links have proven remarkably resilient. An additional benefit comes in the flexibility and functionality provided by the links - giving TasNetworks more visibility of performance, enabling better monitoring of service levels.

"The Fujitsu FRX-3 Series makes it easy to configure separate services and gives us more control over how we allocate services with better monitoring of service levels," says Clerk. "This real-time visibility means we can see whether radio links have been affected by weather for example, identify issues more quickly and zero in on faults remotely. This improves availability and reduces our operational costs."

TasNetworks now enjoys a reliable, high-speed and manageable radio network, enabling it to monitor power system protection and deploy new services rapidly - ensuring a fast time-to-market for its customers. Different architectures can be built easily for ultimate deployment versatility, while remote areas can access vital services such as mobile communications and WiFi.

"Fujitsu was professional, motivated and worked proactively with us to achieve the best outcomes so it felt like a true partnership," concludes Clerk. "I'm sure we will continue to collaborate on fresh projects in the future."

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